SAFETY DATA SHEET



ISOPROPYL ALCOHOL

Section 1. Identifi	cation
GHS product identifier	: ISOPROPYL ALCOHOL
Other means of identification	: Not available.
Product type	: Liquid.
Relevant identified uses of	the substance or mixture and uses advised against
Not applicable.	
Supplier's details	: Manufacturer: Techspray 8125 Cobb Center Drive Kennesaw, GA 30152 Tel: 800-858-4043 1 703-527-3887
Emergency telephone number (with hours of operation)	: Chemtrec - 1-800-858-4043 CANTUC (Canadian Transportation): (613) 996-6666 Emergency phone: (800) 858-4043 24/7
Section 2. Hazard	s identification
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	: Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness and dizziness.
Precautionary statements	
Prevention	: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.
Response	: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention
Storage	: Store locked up. Store in a well-ventilated place. Keep cool.
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Section 2. Hazards identification

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

Section 3. Composition/information on ingredients

: None known.

Substance/mixture	1	Substance	
Other means of	:	Not available.	
identification			

CAS number/other identifiers

CAS number Product code	: 67-63-0 : 1610/CAN/EUR-GS, G1, G4,	G 5G 54G	
Ingredient name		%	CAS number
Isopropyl alcohol		99.6 - 100	67-63-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Most important sympto	oms/effects, acute and delayed
Potential acute health	
Eye contact	: Causes serious eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact	: No known significant effects or critical hazards.

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Ingestion	: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
Over-exposure signs/symp	otoms
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	: Adverse symptoms may include the following: Irritating to mouth, throat and stomach. nausea or vomiting Ingestion Seek medical attention.
Indication of immediate me	dical attention and special treatment needed, if necessary
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask o self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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Section 6. Accidental release measures

		e equipment and emergency procedures
For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	;	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for co	onta	ainment and cleaning up
Small spill		Stop leak if without risk. Move containers from chill area. Use another set to all
	•	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handlin	g	
Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources, Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name		Exposure limits
Isopropyl alcohol		ACGIH TLV (United States, 4/2014). STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. NIOSH REL (United States, 10/2013). STEL: 1225 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m ³ 10 hours. TWA: 400 ppm 10 hours. OSHA PEL (United States, 2/2013). TWA: 980 mg/m ³ 8 hours. TWA: 400 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 1225 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.
ontrols	other engineering controls to keep recommended or statutory limits. T	Use process enclosures, local exhaust ventilation o worker exposure to airborne contaminants below any The engineering controls also need to keep gas, any lower explosive limits. Use explosion-proof
Environmental exposure controls	: Emissions from ventilation or work they comply with the requirements	process equipment should be checked to ensure of environmental protection legislation. In some ngineering modifications to the process equipment ons to acceptable levels.
ndividual protection meas	ures	
Hygiene measures	eating, smoking and using the laval Appropriate techniques should be u	oroughly after handling chemical products, before tory and at the end of the working period. used to remove potentially contaminated clothing. e reusing. Ensure that eyewash stations and safety on location.
Eye/face protection	assessment indicates this is necess gases or dusts. If contact is possib	approved standard should be used when a risk sary to avoid exposure to liquid splashes, mists, ole, the following protection should be worn, unless degree of protection: chemical splash goggles.
Skin protection		
Hand protection	worn at all times when handling che necessary. Considering the param during use that the gloves are still r noted that the time to breakthrough	ves complying with an approved standard should be emical products if a risk assessment indicates this is teters specified by the glove manufacturer, check retaining their protective properties. It should be n for any glove material may be different for different of mixtures, consisting of several substances, the t be accurately estimated.
Body protection	performed and the risks involved ar handling this product. When there	the body should be selected based on the task being nd should be approved by a specialist before is a risk of ignition from static electricity, wear anti-
	static protective clothing. For the g should include anti-static overalls, t	reatest protection from static discharges, clothing boots and gloves.

Section 8. Exposure controls/personal protection

Respiratory protection

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

:	Liquid.
:	Clear. Colorless.
:	Alcohol-like.
:	Not available.
:	7
:	Not available.
:	82°C (179.6°F)
:	Closed cup: 11.7°C (53.1°F) [Tagliabue.]
:	1.7 (butyl acetate = 1)
:	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
:	Lower: 2% Upper: 12%
:	Not available.
:	2.07 [Air = 1]
:	Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	
Isopropyl alcohol	LD50 Dermal LD50 Oral	Rabbit Rat	12800 mg/kg 5000 mg/kg	-	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	1-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	4-	100	-
		1 m m		milligrams	
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Isopropyl alcohol	-	3	·

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Isopropyl alcohol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely : Not available. routes of exposure

Potential acute health	effects
Eye contact	: Causes serious eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

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Section 11. Toxico		
Eye contact	:	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	:	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	:	Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	:	Adverse symptoms may include the following: Irritating to mouth, throat and stomach. nausea or vomiting
		Ingestion Seek medical attention.
Delayed and immediate effec	cts	
<u>Delayed and immediate effec</u> Short term exposure	cts :	Ingestion Seek medical attention.
		Ingestion Seek medical attention.
Short term exposure Potential immediate	:	Ingestion Seek medical attention. and also chronic effects from short and long term exposure
Short term exposure Potential immediate effects	:	Ingestion Seek medical attention. and also chronic effects from short and long term exposure Not available.
Short term exposure Potential immediate effects Potential delayed effects	:	Ingestion Seek medical attention. and also chronic effects from short and long term exposure Not available.
Short term exposure Potential immediate effects Potential delayed effects Long term exposure Potential immediate effects	: :	Ingestion Seek medical attention. and also chronic effects from short and long term exposure Not available. Not available.
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Short term exposure Potential immediate effects Potential delayed effects Long term exposure Potential immediate effects Potential delayed effects Potential delayed effects Potential chronic health effects Not available. General	: : : : : :	Ingestion Seek medical attention. and also chronic effects from short and long term exposure Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Short term exposure Potential immediate effects Potential delayed effects Long term exposure Potential immediate effects Potential delayed effects Potential delayed effects Potential chronic health effects Not available. General Carcinogenicity	: : : : : :	Ingestion Seek medical attention. and also chronic effects from short and long term exposure Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. No known significant effects or critical hazards. No known significant effects or critical hazards.
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Short term exposure Potential immediate effects Potential delayed effects Long term exposure Potential immediate effects Potential delayed effects Potential delayed effects Potential chronic health effects Not available. General Carcinogenicity	: : : : : : : : :	Ingestion Seek medical attention. and also chronic effects from short and long term exposure Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	5010 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute LC50 1400000 to 1950000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1400000 µg/l	Fish - Gambusia affinis	96 hours

Section 12. Ecological information

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Isopropyl alcohol	0.05	-	low

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1219	UN1219	UN1219	UN1219	UN1219	UN1219
UN proper shipping name	ISOPROPANOL (Isopropyl alcohol)	ISOPROPANOL (Isopropyl alcohol)	Isopropyl alcohol	(Isopropyl alcohol)	ISOPROPANOL	ISOPROPANOL (Isopropyl alcohol)
Transport hazard class(es)	3	3	3	3	3	3
Packing group	11	11	II	11	11	11
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	<u>Hazard</u> identification number UN1219		-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Transport in bulk according : Not available. to Annex II of MARPOL 73/78 and the IBC Code

Section 15. Regulatory information

(Essential Chemicals) SARA 302/304 Composition/information					
(Precursor Chemicals) DEA List II Chemicals	:	Not listed			
Clean Air Act Section 602 Class II Substances DEA List I Chemicals		Not listed			
Clean Air Act Section 602 Class I Substances	:	Not listed			
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	:	Not listed			
		TSCA 8(a) CDR E All components an		on: Not determ	ined

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Isopropyl alcohol	99.6 - 100	Yes.	No.	No.	Yes.	No.

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SARA 313

	Product name	CAS number	%	
Form R - Reporting requirements	Isopropyl alcohol	67-63-0	99.6 - 100	
Supplier notification	Isopropyl alcohol	67-63-0	99.6 - 100	

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

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Montreal Protocol (Anne	<u>xes A, B, C, E)</u>
Not listed.	
Chemical Weapon Conv	ention List Schedules I, II & III Chemicals
International regulations	
Pennsylvania	: The following components are listed: 2-PROPANOL
New Jersey	: The following components are listed: ISOPROPYL ALCOHOL; 2-PROPANOL
New York	: None of the components are listed.
Massachusetts	: The following components are listed: ISOPROPYL ALCOHOL
State regulations	

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Section 15. Regulatory information

Not listed.

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1. 1. 1

Stockholm Convention on Persistent Organic Pollutants Not listed.

Rotterdam Convention on Prior Inform Consent (PIC) Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals Not listed.

International lists

National inventory	
Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: All components are listed or exempted.
Malaysia	: All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

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Section 16. Other information

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Version	: 1
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = Iogarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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